



Crown Corporation

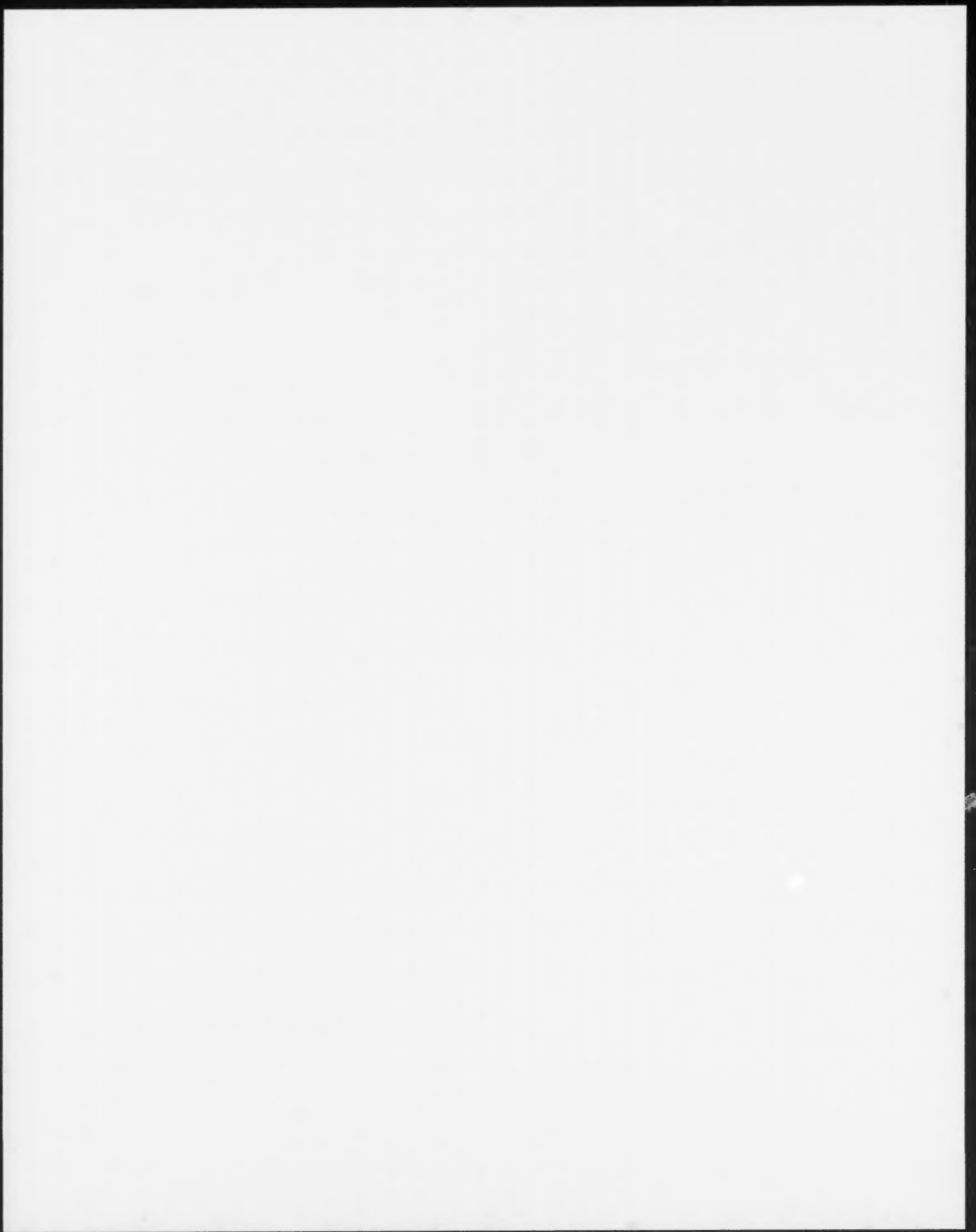
B U S I N E S S P L A N S

FOR THE FISCAL YEAR 2013–2014

Halifax-Dartmouth
Bridge Commission
Business Plan 2013–2014

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Message from the Chair and CEO

We are pleased to present the 2013–2014 business plan for Halifax Harbour Bridges.

The priorities in this business plan focus on ensuring that the organization continues to provide safe, efficient, and reliable cross-harbour transportation infrastructure at an appropriate cost. How this is accomplished is through the following:

- Detailed annual inspections followed up with a comprehensive maintenance program and strategically selected capital projects to ensure the long term safety of the bridges and the traveling public.
- Minimizing incidents and clearing them quickly when they do occur.
- Continuing to use technology to manage demand by promoting electronic tolling and other traffic management systems.
- Operating with strong fiscal management.
- Conducting maintenance and capital projects to ensure the long-term safety of the bridges and the travelling public.

The specific projects for achieving these results for the coming fiscal year are outlined in this plan.

Of particular note is the Macdonald Bridge suspended spans re-decking project. Over the past three years and for the next three years, much of the focus for HHB has been and will continue to be on this project. The bridge remains safe, but after 60 years the deck is wearing out and needs replacement, which will extend the life of the bridge and reduce maintenance. The on-site work will begin with the first panel being replaced in the first quarter of 2015.

We will focus on reducing traffic incidents through a public awareness campaign and apply more efficient means of reducing the effect of incidents when they do occur.

We will continue to work with stakeholders to identify improvements, which will assist future capacity requirements and increase electronic tolling (MACPASS) distribution.

We will maintain a strong financial position with a sound financial plan in place, as supported by two national bond rating agencies.

The bridges are vital transportation links and determining factors in the economic development of HRM and the region. We continue to work toward providing world-class innovative transportation solutions.

Wayne F. Mason
Chairman of the Board of Commissioners

Steve Snider
General Manager and CEO

Mission

To provide safe, efficient, and reliable cross-harbour transportation infrastructure at an appropriate cost.

Vision

To be recognized as world-class in the implementation of innovative transportation solutions.

Mandate

The Halifax-Dartmouth Bridge Commission (operating as Halifax Harbour Bridges or HHB) is the self-supporting entity that operates two toll bridges: the Angus L. Macdonald Bridge and the A. Murray MacKay Bridge. It was created in 1950 by a statute of the Province of Nova Scotia and now operates under a statute passed in 2005. In accordance with Section 27 of the Halifax-Dartmouth Bridge Commission Act:

27 (1) With the approval of the Governor in Council, the Commission may construct, maintain and operate a transportation project across Halifax Harbour and the North West Arm, or either of them.

Core Values

The following values are the essential principles that guide Halifax Harbour Bridges as an organization:

Safety – a fundamental focus and shared responsibility

Stewardship – the protection and maintenance of our bridges

Customer service – focused on excellence

Respect – relationships are based on open, truthful and professional communications

Community – engagement and support of our communities

Integrity – act with integrity, credibility, and accountability

Engagement – focused on employee development and participation

Leadership – competent, energetic, and focused

Planning Context

Organizational Structure

The Board of Commissioners for Halifax Harbour Bridges (HHB) reports to the Minister of Finance of the Province of Nova Scotia. The board has nine members: five are appointed by the Province of Nova Scotia, including the chair and vice chair, and four are regional



councillors, appointed by Halifax Regional Municipality. Within the board structure, standing committees provide governance and direction to audit; safety, maintenance, and engineering; finance/administration/planning; and operations, tolling, and communications.

HHB has 35 permanent staff and employs approximately 35 painters and 12 gardening staff seasonally. Also, 50 members of Commissionaires Nova Scotia (CNS), who are under contract, provide operational services to HHB.

Strengths

- HHB has 58 years of experience maintaining and operating tolled suspension bridges.
- HHB has expertise in electronic toll collection.
- HHB's focus on the safety of employees and everyone who works on and around the bridges is a priority.
- HHB is financially self-reliant. As a self-funding user-pay operation, HHB receives no funding from the provincial government.
- HHB is fiscally responsible, as demonstrated with strong ratings from two national rating agencies: Toll Revenue Debt rating of AA (low) with DBRS and a long-term issuer credit rating of AA- stable with S&P.
- Through strategic capital investments and a comprehensive maintenance plan, the harbour bridges are two of the best maintained pieces of infrastructure in the province.
- MACPASS, HHB's electronic toll collection system, reduces toll plaza congestion and idling times to benefit the environment.

Weaknesses

- The bridges are reaching their mid-life. As they age they become more expensive to maintain.
- Based on current traffic growth projections the bridges are approaching full capacity. Traffic continues to grow year over year. There is very little that can be done to HHB infrastructure to ease congestion.
- The potential for additional capacity on the two bridges is limited because of limited access and egress capacity. This is particularly the case on the Macdonald Bridge and the existing adjacent HRM road network.

Opportunities

- HHB continuously looks for ways to make crossing the bridges more efficient for the travelling public.
- HHB continues to take a leadership role in finding solutions to manage the demand for transportation.

- HHB continues to participate in the discussion of sustainable transportation in this region.
- Introduce communications to help the public better understand the long-term plans of HHB and the role the public plays in minimizing incidents on the bridges.
- Broaden the application of MACPASS Plus, similar to the model used to park at the Stanfield International Airport.

Threats

- HHB is vulnerable to adverse economic developments that arise as a result of rising fuel costs or a downturn in the economy. Both can have a negative impact on traffic volumes on the bridges and affect revenue.
- Ensuring the safety of the public and the bridges is of the utmost priority for HHB, which has implemented a state-of-the-art security system to help protect the bridges – two critical pieces of infrastructure in the province.

Strategic Goals

To achieve our vision, four key strategic goals guide HHB.

1. Quality and Standards

Our customers, communities and colleagues will recognize the high quality with which we safely and efficiently operate and maintain the bridges.

Objectives

- Improve safety for employees, contractors and users.
- Exceed standards for maintenance and operations.
- Reduce environmental impact.

2. Recognition of Values

Customers will appreciate their experience crossing the bridges.

Objectives

- Decrease the frequency and impact of incidents on traffic.
- Increase quality of customer service.
- Improve active transportation.

3. Innovation

The public and government will recognize HHB as a leader in providing innovative transportation solutions.



Objectives

- Increase real-time messaging to the public.
- Increase efficiency of toll collection.

4. Leadership

We will be leaders within the workplace and within our communities.

Objectives

- Build our leadership skills.
- Increase the level of employee engagement.

Core Business Areas

1. Maintenance and Engineering

Objective: *To ensure that the bridges are structurally sound and well maintained.*

Each year the two harbour bridges undergo a rigorous inspection to identify maintenance requirements and to ensure that items from previous inspections are being addressed properly. The annual inspection report forms the basis of the three year maintenance plan.

The major projects completed in 2012 were the roadside barrier improvements on the MacKay Bridge approach roads; additionally, most of the anchorage repairs and waterproofing (both bridges) and the security fencing were completed.

The MacKay Bridge suspended spans steel-deck-life-assessment laboratory work and field strain-gauging are well underway.

Stemming from the concrete investigation at the Macdonald Bridge, concrete pier repairs are planned in three phases. The first phase is planned for 2013, the second in 2014. The third phase will likely be conducted in 2017. A similar comprehensive concrete investigation is planned at the MacKay Bridge for 2013.

Focus for 2013–2014

- Wrap up the carry-over projects from 2012–2013 (Macdonald and MacKay anchorages and security fencing).
- Undertake the final phase (Phase 3) of the roadside barrier improvements, which improve the roadside barriers by adding crash cushions and attenuators, and by making the barriers continuous. The final phase will complete the remaining sites on the MacKay Bridge approach roads and address the sites at the Macdonald Bridge.
- Complete the laboratory fatigue testing and the field strain-gauge monitoring to provide a better assessment of the MacKay Bridge suspended spans deck life.
- Conduct Phase 1 (of 3) of the Macdonald Bridge concrete pier repairs.
- Improve guide signage on overhead sign structures.

- Replace selected MacKay Bridge suspender ropes.
- Conduct comprehensive concrete investigation on MacKay Bridge substructure, deck, and approach retaining walls to assist in defining timing of repairs and consideration in conjunction with suspended spans deck-life assessment.
- Complete the design for the Macdonald Bridge suspended spans re-decking, issue tender, and award contract. The engineering for this project began in 2010 and will entail the segmental replacement of the suspended spans deck (including stiffening trusses and suspender ropes). Construction is planned for 2014 to 2016.

The extensive maintenance at the MacKay Bridge is part of the longer-term plan to ensure that major maintenance projects are complete in preparation for replacement of the suspended spans on the Macdonald Bridge between 2015 and 2016. This is part of HHB's commitment to avoid traffic congestion by ensuring that both bridges are not undergoing significant projects at the same time.

2. Innovative Tolling Solutions

Objective: Maintain convenient and reliable passage by working with stakeholders to identify improvements, which will assist future capacity requirements.

Objective: Continue to actively market electronic toll collection (MACPASS) to decrease traffic congestion and accommodate future traffic growth.

Objective: Increase efficiency of toll collection.

Focus for 2013–2014

- Gain further understanding of how to best implement future tolling efficiencies.
- Focus on reducing operational costs by utilizing technology.
- Undertake the redesign of the MacKay toll plaza to enhance safety and introduce efficiencies that can be achieved by optimizing the lane configuration in the toll plaza.
- Investigate additional customer conveniences for the MACPASS program. These initiatives include
 - development of a new service centre
 - implementation of new account replenishment options using retailers
 - development of smartphone applications for MACPASS account management
- Seek additional applications for the MACPASS *plus* parking solution.



3. Operational Safety and Emergency Preparedness

Objective: To ensure the safety and security of the travelling public and employees through ongoing reviews and implementation of HHB's policies, procedures, and initiatives.

HHB ensures that the bridges are well maintained and in good condition for the safety of the travelling public. Safety measures include weather stations, mobile speed radar, ice detection sensors, round-the-clock bridge security and traffic enforcement, security cameras, emergency telephones on the Macdonald Bridge, dynamic message signs, and a dedicated side walk and bicycle lane on the Macdonald Bridge.

Focus for 2013–2014

- Implement stage two of a traffic awareness campaign focused on the reduction of incidents on HHB facilities.
- Enhance driver awareness through the effective and timely messaging of traffic incidents.
- Review and update the emergency management strategy within HHB.

Priorities for 2013–2014

Engineering

- Continue extensive work on MacKay Bridge to ensure that major maintenance projects are complete in preparation for replacement of the suspended spans on the Macdonald Bridge between 2015 and 2016.
- Complete design for the Macdonald Bridge suspended spans re-decking, issue tender, and award contract.

Maintenance

- Implement a computerized maintenance management system.

Workplace Safety

- Promote a safe and injury-free workplace.
- Monitor the workplace for continuous safety improvement opportunities.

Operational Safety and Emergency Preparedness

- Implement stage two of a traffic awareness campaign focused on the reduction of incidents on HHB facilities.
- Review and update the strategic direction for emergency management within HHB.

Innovative Tolling Solutions

- Redesign the MacKay Bridge toll plaza to enhance safety and introduce efficiencies that can be achieved through optimizing lane configuration.
- Implement new account replenishment options, using retailers.

Communications

- Continue to provide relevant and clear communications about the Macdonald Bridge suspended span re-decking project.

Finance

- Carefully monitor expenditures to earned value for Macdonald Bridge suspended spans replacement project.



Budget Context

	Estimate 2012-13 (\$ 000)	Forecast 2012-13 (\$ 000)	Estimate 2013-14 (\$ 000)
Revenue			
Toll revenue	32,087	32,527	32,900
Other rate charges	162	163	163
Investment and sundry income:			
Trust fund investments	269	280	329
Other	350	346	330
Investment income	50	89	70
Contributed capital contribution	65	65	65
Total revenue	32,983	33,470	33,857
Expenses			
Operating	6,470	6,222	6,837
Maintenance	5,157	4,595	4,594
Amortization	7,209	7,818	8,239
Debt servicing	2,511	2,504	2,37
Loss (profit) on disposal of property, plant, and equipment	100	53	60
Total expenses	21,447	21,192	22,102
Net operating income	11,536	12,278	11,755
Other comprehensive income	0	(33)	0
Comprehensive income	11,536	12,245	11,755

Future Capital Requirements

Year	Amount (\$ adjusted for inflation)
2013-14	21,533,000
2014-15	45,400,000*
2015-16	70,680,000*
2016-17	72,447,000*
2017-18	26,366,000*
2018-19	3,611,000
2019-20	7,650,000
2020-21	2,593,000
2021-22	5,315,000
2022-23	9,534,000
2023-24	170,313,000**
2024-25	181,725,000**
2025-26	2,933,000
Total capital requirement 2013 to 2026	620,100,000

* Macdonald Bridge suspended span re-decking.

** MacKay Bridge suspended span re-decking.



Outcomes and Performance Measures

Core Business Area 1 Maintenance and engineering priorities for 2013–2014

Outcome	Measure/rationale	Base Year	Annual Target	Trends	Strategies to Achieve Target
Mackay Bridge suspended spans deck monitoring and test program	Final report	Long-range plan anticipates deck replacement in 2022–23	2012: 80%	2011: 25%	Ensure that strain-gauge monitoring and fatigue laboratory testing are complementary
		Cracks found and repaired in 2009	2013: 100%	2012: 80%	
		Deteriorated deck with cracks replaced adjacent main towers			Determine realistic load or deflection criteria
		Fatigue samples taken from deck panels removed from main towers in 2010			
Roadside barrier improvements	Final inspection report	From 2009 Speed and Road Safety study	2012: Phase 2 100%	2011: Phase 1 (AMIM Dart median) 100%	Define work for off-peak periods to minimize disruption to traffic
		First component of road safety improvements	2013: Phase 3 100%	2012: Phase 2 (AMIM barriers) 100%	
		Phase 2 awarded			Laise with HBM and NS where abutting their roads
		Design Phase 3 (final phase of roadside barriers) complete			
		Future components address lighting, speed reduction, and signage			Conduct work during conducive temperatures for concrete work

Core Business Area 1

Maintenance and engineering priorities for 2013–2014

Outcome	Measure/rationale	Base Year	Annual Target	Trends	Strategies to Achieve Target
Macdonald Bridge concrete pier repairs	Final inspection report	Concrete investigation 2012 Phased program over 3 years. Final phase likely to be implemented after suspended spans re-decking	2013: Phase 1 100% 2014: Phase 2 100% 2017: Phase 3 100%	n/a	Tender early in year to avoid cold weather conditions Communicate work to neighbours
Guide signage upgrade	Final inspection report	Stems from 2009 Speed and Road Safety study Discussions ongoing with HRM and NS Transportation	2013: 100%	n/a	Consider in conjunction with corridor suite of signage Coordinate and agree with HRM and NS Define work for off-peak periods to minimize traffic disruption Consider other signage requirements for tolls and regulatory
Macdonald Bridge suspended spans deck replacement	Executed contract	Design more than 50% complete Stakeholder contacts ongoing Risk assessment underway Wind tunnel assessments complete Specifications underway	2013: contract award 100% 2014: fabrication 70% 2015: fabrication 100% 2015: deck replacement 75% 2016: 99% complete	2010: scoping study 100% 2011: preliminary engineering study 100% 2012: Phase 1 design	Stakeholder consultation Risk assessment Independent engineering check Wind tunnel assessments Coordination with HPA on vessel movements Integrated specification team with designers, legal, and insurers Prequalification process



Core Business Area 2 *Innovative tolling solutions priorities for 2013-2014*

Outcome	Measure/rationale	Base Year	Annual Target	Trends	Strategies to Achieve Target
Increased efficiency of traffic flow & reduced congestion	Increased percentage of MACPASS use	2001: 32.4%	2013: 73%	2008: 65.8% 2009: 68.7% 2010: 70.0% 2011: 72.6% 2012: 72.7%	Increase distribution Provide excellence in customer service Survey MACPASS customers
MACPASS customer service satisfaction survey	Customer satisfaction survey results	This will mark first time MACPASS customers are surveyed on their satisfaction as customers; 2013 will be benchmark year	Survey results will provide benchmark for setting targets for future surveys		

Core Business Area 3

Operational safety and emergency preparedness priorities for 2013–2014

Outcome	Measure/rationale	Base Year	Annual Target	Trends	Strategies to Achieve Target
Implementation of a second public safety awareness campaign	Annual MVA statistics and reduction in traffic related incidents	Awareness survey results from June 2012	Maintain or reduce 2011 vkt statistics	<i>Incidents (#)</i> 2010: 444	Targeted advertisement and radio campaign
	Awareness survey results	Base line of 1.2 incidents per 100,000 vehicle kilometres travelled (vkt)	Average speeds to decrease	2011: 167	Survey of awareness amongst motorists
		2011 average speeds	Macdonald: 50kph	2012: 245	Posters and billboards
		2012 average speeds	Mackay: 70kph		Implement use of speed warning signs
			Macdonald: 57kph Mackay: 70kph	<i>Speeds (km/h)</i> Mackay 2010: 71.4 2011: 65.0 2012: 70.0	
Improved communication to bridge users	Implement additional Dynamic Message Signs located at decision-making points within HRM	Six (6) signs currently in use providing key traffic and safety-related messages to public	Add an additional four (4) signs further out from immediate bridge(s) area, allowing for traffic commuting decisions	Macdonald	Partner with HRM on initiative Secure project funding from partner agencies Research and identify key decision-making points Install and activate new signs Alert public to new message system
				2010: 58.0	
				2011: 52.6	
				2012: 57.0	
				No trend data available	

